REMARKS

Applicant thanks the Examiner for carefully considering the present application. Please reconsider the present application in view of the following remarks.

Disposition of Claims

Claims 1-6 are currently pending in the present application. Claims 1 and 4 are independent claims. Claims 2 and 3 depend from claim 1, and claims 5 and 6 depend from claim 4.

Rejections Under 35 U.S.C. § 103

Claims 1-6 of the present application were rejected under U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 6,947,165 ("Kataoka") in view of U.S. Patent No. 6,137,588 ("Deen"). This rejection is respectfully traversed.

Claims 1 and 4 require, in part, "if the interrupt copy start command information is received while the print job data processing means operates, the copy control means for causing the print job data processing means to interrupt the processing being executed and then starting processing of waiting for an available storage area of a capacity required for executing the copy control processing to be formed in the data storage means, when an available storage area of the capacity required for executing the copy control processing is formed, the copy control means for causing the print execution means to interrupt processing for the print data generated by the print job data processing means and then starting the copy control processing."

In the copy control means of the claimed invention, if the interrupt copy start command information is received by the copy control means while the print job data processing

means is operating, the copy control means makes the print job data processing means interrupt its operation, then waits until sufficient available storage area for executing the copy control processing is formed in the data storage means. Then, the copy control means makes the print execution means interrupt printing, at which point the copy control processing is initiated. In other words, the copy control means of the claimed invention interrupts the printing process and waits for sufficient available storage before starting the copying process.

Kataoka discloses a communication terminal device having an interrupt function. During the interruption process, if the user presses the copy key, the copying process is automatically started. (*See* S42, S43 in Fig. 2 of Kataoka) However, if the copy key is not pressed during the interruption process, it is determined whether printing based on the remaining capacity of the image memory should be executed. (*See* S46 in Fig. 2 of Kataoka) If the answer is yes, then it is determined whether the remaining capacity of the image memory is less than a prescribed value. (*See* S47 in Fig. 2 of Kataoka) If the vacant space in the memory is greater than the prescribed value, the program simply maintains the interruption process, by returning to S42. Eventually, the image memory will have vacant space less than the predetermined volume. It is then determined whether printable image and data exist in the image memory. (*See* S48 in Fig. 2 of Kataoka) If yes, one page worth of image/data is printed from the printer, and then it is again determined whether the copy key is pressed. (*See* S49, S50 in Fig. 2 of Kataoka) Otherwise, the program simply maintains the interruption process, by returning to S42. The Examiner states the above limitations are taught by Kataoka because "whenever the copy interrupt key is pressed, the image memory can have sufficient amount to store the incoming data in order to prevent overflowing of the memory." However, in contrast to the claimed invention, during the entirety of the interruption process,

copying is not initiated until the copy key is pressed, and the memory capacity check is never conducted before the copying initiates. The memory capacity check only occurs to determine whether to print one page of image from the image memory. Thus, the interrupt process of Kataoka does not wait until sufficient available storage area for executing the copy control processing is formed in the data storage means. Instead, the interrupt process of Kataoka waits for the pressing of the copy key. Thus, as explained above, a memory capacity check never occurs with respect to the copying processing. Therefore, Kataoka fails to determine whether there is enough memory to conduct the copy control processing after the copy key is pressed. Accordingly, Kataoka does not show or suggest at least the above limitations of the claimed invention.

The Examiner admits that Kataoka does not disclose waiting for a sufficient available storage area to commencing the operation, but that Deen, by teaching a machine equipped with separate memories in column 9, lines 17-20, discloses the limitation.

Deen teaches, in the paragraph containing the cited portion, two different embodiments of digital reproduction control systems. In the first embodiment, when an operator interrupts the printing process in order to make copies, if there is sufficient memory available for copying in the storage unit 15, the rasterized printing image data stay in the storage unit and the copies are made, after which the printing process is restarted after waiting time t_w. However, if there is insufficient memory available for copying data in the storage unit 15, the rasterized printing image data is erased from the storage unit 15 to make room for copying data, and after the interrupt copying is completed, rasterization of the printing image data is restarted completely or partially. In the second embodiment, the system has two separate memories, one for copying and one for print

orders, so that when an operator interrupts the printing process in order to make copies, there is always sufficient memory for the copying data, because the rasterized printing image data is stored on separate memory. (*See* lines 1-20 in column 9 of Deen)

As explained above, in the copy control means of the claimed invention, if the interrupt copy start command information is received by the copy control means while the print job data processing means is operating, the copy control means makes the print job data processing means interrupt its operation, then waits until sufficient available storage area for executing the copy control processing is formed in the data storage means.

The two embodiments of Deen fail to show or suggest the above limitations, because there is no waiting until sufficient available storage area for executing the copy control processing is formed in the data storage means. Instead, in the first embodiment, the system of Deen simply erases the rasterized printing image data to make room for the copying data. Thus, the system of the first embodiment wastes the rasterization already completed on the printing image data. In the second embodiment, the system of Deen never waits until sufficient available storage area for executing the copy control processing is formed in the data storage means, because there is always sufficient available storage area, since the rasterized printing image data is stored on a separate memory.

As explained above, Deen does not show or suggest waiting for an available storage area of a capacity required for executing the copy control processing to be formed in the data storage means. In fact, by teaching deletion of rasterized printing image data and separate memories for storing the printing image data and storing the copying data, Deen actually teaches

away from such a feature. That is, while the claimed invention promotes efficient use of data storage means by waiting for an available storage area of a capacity required for executing the copy control processing to be formed in the data storage means, Deen teaches away from the efficient use of memory by disclosing an embodiment in which the rasterized printing image data is deleted to make room for copying data, and an embodiment in which two separate memories are employed.

In view of the above, claims 1 and 4 are patentable over Kataoka and Deen, whether considered separately or in combination, for at least the above reasons. Claims 2 and 3 depend from claim 1, and claims 5 and 6 depend from claim 4. Thus, claims 2, 3, 5, and 6 are patentable over Kataoka and Deen, for at least the same reasons as claims 1 and 4. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account No. 50-0591, under Order No. 04995/129001 from which the undersigned is authorized to draw.

Dated: April 10, 2008   Respectfully submitted,

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